

IN THE CLAIMS:

1. (Currently Amended) A method of reducing the effects of intermodulation distortion in a zero-IF receiver (100), comprising: receiving an RF signal, modulating the RF signal to provide one or more baseband signals, detecting (240) an occurrence of intermodulation distortion within the one or more baseband signals, and selectively enabling (250) a wide mode of a wide-notch filter (130) having a predetermined wide mode and a normal mode, said wide mode having a wider frequency range than said normal mode, to attenuate for attenuating signal components of the one or more baseband signals within at the predetermined wide mode notch-width frequency range of the wide-notch filter (130), based on the occurrence of the intermodulation distortion.

2. (Currently Amended) The method of claim 1, wherein the predetermined wide mode notch-width is approximately +/-60 kHz, and approximately centered at zero-Hertz.

3. (Currently Amended) The method of claim 1, further including detecting (280) a cessation of the intermodulation distortion, and selectively disabling (280) the wide mode of the wide-notch filter (130), based on the cessation of the intermodulation distortion.

4. (Currently Amended) The method of claim 1, wherein detecting (240) the occurrence of intermodulation distortion includes: determining (230) a plurality of signal strength measures, and determining the occurrence of intermodulation distortion based on a relationship among the plurality of signal strength measures.

5. (Currently Amended) The method of claim 4, wherein the plurality of signal strength measures include: an RSSI measure, and an Eb/Nt measure; and determining the occurrence of intermodulation distortion if the Eb/Nt measure is below a first threshold value when the RSSI measure is above a second threshold value.

6. (Currently Amended) The method of claim 5, further including selectively disabling ~~(280)~~ the wide mode of the wide-notch filter ~~(130)~~ when the Eb/Nt measure substantially increases.

7. (Original) The method of claim 4, wherein the plurality of signal strength measures include: an RSSI measure, and an RF energy measure; and determining the occurrence of intermodulation distortion if the RSSI measure is below a first threshold value when the RF energy measure is above a second threshold value.

8. (Original) The method of claim 4, wherein the plurality of signal strength measures include: a first measure of energy in a first frequency band of the one or more baseband signals, and a second measure of energy in a second frequency band of the one or more baseband signals, the second frequency band being higher than the first frequency band; and determining the occurrence of intermodulation distortion if the first measure of energy is substantially higher than an estimated first measure of energy corresponding to the second measure of energy absent intermodulation distortion.

9. (Currently Amended) The method of claim 1, further including disabling ~~(290)~~ the wide mode of the wide-notch filter(130), based on a duration since enabling the wide mode of the wide-notch filter(130).

10. (Currently Amended)A receiver ~~(100)~~ comprising: a mixer ~~(120)~~ that is configured to convert a received RF signal to an analog baseband signal, a detector ~~(170, 370, 470)~~ that is configured to assert a detection signal when intermodulation distortion is detected in the analog baseband signal, a wide-notch filter (130) having a predetermined wide mode and a normal mode, said wide mode having a wider frequency range than said normal mode, said filter being operably coupled to the mixer (120) and the detector ~~(170, 370, 470)~~, that is configured ~~to for activating the wide mode of the wide-notch filter~~ for selectively attenuateattenuating signal components in the analog baseband signal when the detection signal is asserted, and a baseband processor ~~(160, 560)~~ that is configured to receive the analog baseband signal and to provide therefrom a receiver output.

11. (Currently Amended)The receiver ~~(100)~~ of claim 10, wherein the wide-notch filter (130) is configured to selectively attenuate signal components within approximately +/-60 kHz of zero-Hertz when the detection signal is asserted.

12. (Currently Amended)The receiver ~~(100)~~ of claim 10, wherein the detector ~~(170, 370, 470)~~ is further configured to de-assert the detection signal to activate the normal mode of the wide-notch filter based on a duration since asserting the detection

signal.

13. (Currently Amended) The receiver (100) of claim 10, wherein the baseband processor (160, 560) is further configured to provide digital measures of signal strengths in the analog baseband signal, and the detector (170, 470) is operably coupled to the baseband processor (160, 560) and is configured to detect the intermodulation distortion in the analog baseband signal based on the digital measures of signal strengths from the baseband processor (160, 560).

14. (Currently Amended) The receiver (100) of claim 13, wherein the digital measures of signal strengths include: an RSSI measure, and an E_b/N_t measure; and the detector (170, 470) asserts the detection signal when the E_b/N_t measure is below a first threshold value and the RSSI measure is above a second threshold value.

15. (Currently Amended) The receiver (100) of claim 14, wherein the detector (170, 470) de-asserts the detection signal to activate the normal mode of the wide-notch filter when the E_b/N_t measure substantially increases.

16. (Currently Amended) The receiver (100) of claim 10, wherein the detector (370) is configured to detect the intermodulation distortion in the analog baseband signal based on: a first measure of signal strength in the analog baseband signal, and a second measure of signal strength in the received RF signal; and the detector (370) asserts the detection signal for activating the wide mode of the wide-notch filter when the first

measure is below a first threshold value and the second measure is above a second threshold value.

17. (Currently Amended)The receiver (400)of claim 10, wherein the detector (470)is configured to detect the intermodulation distortion in the analog baseband signal based on: a first measure of energy in a first frequency band of the analog baseband signal, and a second measure of energy in a second frequency band of the analog baseband signal, the second frequency band being higher than the first frequency band; and the detector (470)asserts the detection signal for activating the wide mode of the wide-notch filter when the first measure of energy is substantially higher than an estimated first measure of energy corresponding to the second measure of energy absent intermodulation distortion.

18. (Currently Amended) The receiver (400)of claim 17, wherein the baseband processor (460,560)is further configured to provide the first and second measures of energy to the detector(470).

19. (Currently Amended)The receiver (400)of claim 10, wherein the received RF signal is a quadrature-modulated signal, and the mixer (120)is configured to provide a pair of quadrature signals that comprise the analog baseband signal.

20. (Currently Amended)The receiver (400)of claim 10, wherein the filter (430) is a digital filter that is included within the baseband processor (460,560).